United States Department of the Interior

FISH AND WILDLIFE SERVICE
2701 Rockcreek Parkway, Suite 106
North Kansas City, Missouri 64116

KANSAS CITY AREA OFFICE
816/374-6166

ECOLOGICAL SERVICES
816/374-5951

March 18, 1980

Colonel Walter C. Bell
District Engineer
Kansas City District, Corps of Engineers
601 East 12th Street
Kansas City, Missouri 64106

Dear Colonel Bell:

This is in reference to the Blue River Channel Modification Project and to plans for mitigation of wildlife habitat lost as a result of the project. A March 7, 1980 meeting among representatives of the Corps of Engineers, City of Kansas City, Missouri, and U.S. Fish and Wildlife Service resulted in the clarification of a number of items and in the identification of a number of proposed measures for wildlife habitat mitigation. Based on our understanding of the discussions held in this meeting, the following have been proposed as measures to mitigate wildlife habitat losses:

1. Fill areas A (18 acres), B (eight acres), and the area near the mouth of Brush Creek (approximately 18-22 acres) will be planted to trees and shrubs and managed as natural areas.

2. Fill area J (nine acres) will be preserved and managed both as a historical landmark and as a natural area.

3. Approximately six acres of fill area K will be converted to a baseball diamond. The remainder of area K (approximately 18 acres) will be planted to trees and shrubs and managed as a natural area.

4. Fill area N is approximately 16 acres. Approximately half of this area will be converted to use for ball diamonds and playgrounds; the remainder will be managed as a natural area.

5. Three hundred and thirty acres of the permanent right-of-way (between 15th and 63rd Streets) will be seeded to and maintained with native grasses. Mowing will be minimized and will generally be restricted to no more than once per year.

6. The Corps of Engineers will plant at least 15 acres of the permanent right-of-way to trees and shrubs.

7. Plans for a nature/hiking/biking trail are included in the City's Master Plan.

All of the above natural areas should be managed primarily as wildlife habitat. Other uses of the areas such as nature/hiking trails and picnic areas should be designed in such a way as to be compatible with this primary goal of providing wildlife habitat. Since these areas are being utilized to mitigate losses of riparian woods, they should be planted to trees and shrubs and maintained as wooded areas. We recommend that you contact the Missouri Department of Conservation for information concerning which species of trees and shrubs provide the best wildlife habitat and which species are best suited for establishment along the Blue River.

Initial establishment of native grasses along the 330 acres of permanent right-of-way may require some special management efforts; however, once these native grasses are firmly established, very little maintenance will be required. The Missouri Department of Conservation has staff members specializing in the management of native grasses. We recommend that you contact the Department's Jefferson City Office for advice on appropriate techniques for establishing and maintaining the native grass right-of-way.

In considering future plans for fill area K, we recommend that if at all possible, the existing oxbow/wetland area be preserved. Wetlands are valuable natural resources which have received increasing nation-wide attention over the last few years. Executive Orders 11990, Protection of Wetlands, and 11988, Floodplain Management, were issued in recognition of the natural and beneficial values of wetlands and flood plains. The oxbow in area K serves the following natural and beneficial functions: high biological productivity, ecological diversity, natural moderation of floods, water quality improvement, and habitat for wildlife. The value of wetlands is also recognized in the Corps of Engineers Regulatory Programs. The regulations for the permit program state a general policy in 33 CFR 320.4 (b)(1), "Wetlands are vital areas that constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest." In conclusion, all factors should be carefully weighed and the oxbow/wetland area should be filled only if there is no practicable alternative.

We trust that the above mitigation measures, items 1 through 7, reflect an accurate account of the proposed mitigation measures as discussed in the March 7, 1980 meeting. If there have been any misinterpretations or there is a need for clarification, please contact us. Accomplishment of the proposed mitigation measures (items 1-7) will fully compensate for wildlife habitat losses due to the Blue River Channel Modification project. Thank you for your interest in our wildlife resources. Please contact us if you have any questions concerning this letter or if we can be of assistance and please keep us apprised of the status of mitigation plans.

Sincerely yours,

James M. Lutley

Tom A. Saunders
Area Manager

cc: RD, Denver, CO (ENV/LWRDP)
EPA, Kansas City, MO
(Section 404 Permits)
Missouri Dept. of Conservation
Jefferson City, MO
Urban Office, Kansas City, MO
Mid-America Regional Council
Attn: Jerry Overton

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Rockcreek Office Building, Suite 106
2701 Rockcreek Parkway
North Kansas City, Missouri 64116

816-374-6166

January 12, 1979

Colonel Walter C. Bell
District Engineer
Kansas City District, Corps of Engineers
601 E. 12th Street
Kansas City, Missouri 64106

Dear Colonel Bell:

This supersedes our letter of September 25, 1978 concerning the Corps of Engineers proposal to modify the Blue River channel from the mouth to near 63rd Street, Kansas City, Missouri. Corps of Engineers representatives raised a number of questions concerning our presentation of data (letter of September 25) gathered in the HEP study conducted by biologists from the Corps of Engineers, Missouri Department of Conservation, and U.S. Fish and Wildlife Service. Following a meeting on October 6, 1978 and subsequent coordination with the respective agencies, we have re-evaluated our analysis of the effects of the project on the fish and wildlife resources of the area. The following revised comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

As a result of poor water quality, the current fishery in the lower Blue River is very limited. However, the fishery has potential for improvement as pollutant discharges are further reduced under mandates of the Federal Water Pollution Control Act. The proposed channelization project will destroy most of the aquatic habitat in the lower 12 miles of the Blue River and will thus eliminate the potential for an improved fishery. Loss of aquatic habitat can be reduced or mitigated in a number of ways. Maintaining diversity within the river channel is essential for good aquatic habitat. An irregular channel bottom which would allow flows to alternate between a series of pools and riffles is much more desirable than a channel bottom with a uniform gradient. A series of pools and riffles could be maintained by erecting structures such as low water dams at various points on the river. The practice of paving entire reaches of the channel is very destructive environmentally and should be avoided.

The Final Environmental Statement (September 1975) adequately assesses the current environmental setting in the Blue River Basin. The area of the proposed channelization project is currently a combination of residential and industrial districts. Mr. Max Batman, Public Works Department, City of Kansas City, Missouri, stated that the entire area along the Blue River downstream of 63rd Street is zoned industrial and future development will occur with or without the

project. Extensive development along the river has already destroyed much of the wildlife habitat. However, a corridor of riparian timber still exists along a significant portion of the river. These areas are valuable habitat for maintaining wildlife populations in an urban area for non-consumptive purposes.

The Final Environmental Statement (ES) on the Blue River projects stated that "channel work on the Blue River below 63rd Street would result in minor reduction in streamside timber." The clearing of 191 acres of riparian timber (which is the majority of riparian timber remaining along this section of the river) constitutes a significant reduction in streamside timber. The ES also stated that "most of the affected acreage lies near the mouth of the Blue River." Our findings were that most of the good wildlife habitat is not near the mouth but is in a riparian corridor from approximately 18th Street upstream to 63rd Street. The area near the mouth of the Blue River is currently being developed by the Armco Steel Corporation, and it is anticipated that the majority of the remaining wildlife habitat will be lost to future development regardless of whether or not the channel modification project is constructed. The riparian corridor from 18th to 63rd Street is particularly valuable for wildlife habitat as it adjoins Swope Park. Swope Park has a total area of 1,760 acres and is interspersed with good wildlife habitat.

Several items listed as beneficial impacts of the project are questionable. One beneficial impact listed was that "flood protection would enhance the opportunity for development of vacant lands." Encouragement of further development in the flood plain is unwise and should not be listed as a beneficial impact. Improving the aesthetics of the area is given as another beneficial impact of the project. Removal of trash and litter along the riverbank will enhance the aesthetics; however, the channel modification will degrade the aesthetics.

The Fish and Wildlife Coordination Act requires that wildlife conservation be considered on an equal basis with other features of the project. Measures should be incorporated into the Blue River Project to replace the wildlife habitat which will be lost as a result of the project. With this objective in mind, biologists from the U.S. Fish and Wildlife Service, Missouri Department of Conservation, and the Corps of Engineers conducted an evaluation of the wildlife habitat which would be affected by the proposed project. The project requires 520 acres of land for a permanent right-of-way plus 630 acres as a temporary right-of-way. About 889 acres of the 1,150 acre total is developed for urban and industrial usage (parking lots, industrial storage, roadways, lawns, etc.) and its value as wildlife habitat is low. Since its habitat value will remain low with or without the project, this 889 acre section was not included in the habitat evaluation. Another 70 acres which was not included in the evaluation consisted of two old fields, one crop field, one pasture and one excavation/fill area. The only habitat type evaluated was 191 acres of riparian woods.

A corridor of riparian woods extends from 63rd Street downstream to about 18th Street. The habitat evaluation team selected fox squirrel, raccoon, cottontail rabbit, mink, red-tailed hawk, brown thrasher, aquatic frogs, white-footed mouse, wood duck, and woodpeckers as wildlife species most representative of the area.

The value of the habitat for wildlife depends on its ability to provide food, shelter, and reproductive success. The results of the habitat evaluation indicated that the average value of the 191 acres of riparian woods is 5.0 based on a rating scale of 0 to 10 (0 being no value and 10 being excellent value).

In considering the future of this 191 acres of riparian woods, it is expected that 75 percent of the existing wildlife habitat will be lost due to further industrial development within the next 50 years without the project. Because of increasing restrictions on flood plain development, lack of accessibility, and periodic flooding, the remaining 25 percent of habitat would remain indefinitely. With the project, an estimated 95 percent of the wildlife habitat will be lost, and increased development promoted by the project will restrict wildlife habitat to that level indefinitely. Our calculations show that 418 habitat units per year will remain without the project and 48 habitat units per year will remain with the project. This results in a net loss of 370 habitat units per year due to the project.

Compensation for these project incurred damages to the wildlife resources and the natural environment should be included in the cost of the project. The exact acreage necessary to compensate for losses cannot be determined until the existing habitat on the acreage offered for compensation is evaluated. We estimate that from 90 to 250 acres of land would be needed to fully compensate for wildlife habitat losses. Initial development and annual management would be needed to raise the wildlife habitat value of compensation lands. Setting aside an area in itself does not compensate for losses since wildlife already inhabit the area. Only by proper development and/or management can the quality of the habitat be raised to offset the habitat lost to the project.

Members of your staff have indicated that land which is currently owned by the city of Kansas City, Missouri would be the most amenable for compensation purposes. City properties along the Blue River downstream of 63rd Street include: 1) a small portion of Swope Park just north of 63rd Street, 2) an area along both sides of Brush Creek at its confluence with the Blue River (Fill area E), 3) the Municipal Farm, 4) Blue Valley Park including fill areas J and K, and 5) an area across the river from Blue Valley Park. Areas 1, 3, and 5 are relatively small; however, they could be developed and managed to mitigate wildlife habitat losses.

One prime area for mitigation is fill areas J and K in Blue Valley Park. These two areas could be developed and managed as natural areas. Area J is an 8.8 acre stand of mature trees. Project plans should be modified to leave area J in its present condition, thus reducing the aforementioned habitat losses. Area K (an area of 18 acres) could be used as a fill area and then developed as a natural area after completion of the project. We prefer that the oxbow of the old Blue River channel not be filled and thus be preserved as a wetland. The old field which comprises most of area K could be filled to the maximum height practicable, contoured, and planted to provide wildlife habitat. Preservation of area J and development and management of area K could reduce the project's impact on wildlife habitat by 117 habitat units per year.

In order to fully compensate for project-incurred damages to wildlife habitat, an additional 253 habitat units per year must be replaced. This could be

accomplished by managing a portion of the Municipal Farm as a natural area. Depending upon the existing wildlife habitat in the area selected, 60 to 170 acres of land could compensate for the additional 253 habitat units. This alternative has the advantage of preserving wildlife habitat in one larger block rather than in several smaller isolated blocks.

Another alternative would be to purchase compensation lands. As a first priority, purchase of private lands from a willing seller should be considered. Compensation lands should be as close to the Blue River project as possible. Fill areas other than J and K would also be potential compensation lands. These areas would require development, management, and preservation as wildlife habitat.

The impact of the project on wildlife habitat could be reduced by the use of high flow bypass channels at areas such as fill areas C and N. This would allow flows to pass through the original river channel during periods of low flow and through the bypass channel during high flow. Significant reduction of adverse project impacts on wildlife habitat would require no filling in areas C and N. For example, not filling area N (16 acres) and preserving it as a natural area would reduce the project impact by 73 habitat units per year. Since the current value of the habitat in area C has not been evaluated, we cannot compute the effect of preservation of this area in terms of habitat units; however, the reduction of habitat units lost would be sizable.

The permanent right-of-way for the project could be managed to mitigate some of the losses of wildlife habitat. Any shrub or tree plantings would benefit wildlife. Another management practice beneficial to wildlife would be restricting mowing to one time per year (preferably between June 15 and June 30).

The Missouri Department of Conservation, Kansas City Urban Office, is in the process of developing proposed plans for a series of hiking/nature trails which would connect various parks and recreational areas in the Kansas City area. The Blue River could be an important link in the trails system. Provisions for an easement (on the right-of-way) along the entire length of the Blue River would be a very beneficial addition to the trails system.

In summary, a number of alternatives exist to compensate for wildlife habitat losses incurred by the Blue River channel modification project. The exact acreage necessary for compensation cannot be determined until the habitat is evaluated for the particular compensation area involved. We rank the alternatives in the following order (beginning with the best alternative): 1) to develop fill area K as a natural area and to preserve and manage fill area J and a portion of the Municipal Farm, 2) to preserve and manage fill areas C and N and a portion of the Municipal Farm, 3) to purchase compensation lands, or 4) a combination of the above three alternatives. Fill areas other than those already mentioned could be used for mitigation in conjunction with any of the alternatives.

We appreciate the opportunity to provide these recommendations for satisfactory mitigation of wildlife habitat losses resulting from the Blue River channel modification project. The Fish and Wildlife Coordination Act provides "that wildlife conservation shall receive equal consideration and be coordinated with other features of water resource development programs." We trust that the information contained in this report will enable you to incorporate a wildlife conservation plan into the project. Please notify us of any changes in the project plans, and do not hesitate to contact us if you have any questions concerning the recommendations in this report. Please provide us with your comments on our views and recommendations.

Sincerely yours,

Tom A. Saunders

Tom A. Saunders
Area Manager

cc: RD, Denver, CO (ENV)
EPA, Kansas City, MO
(EIS Section)
Missouri Dept. of Conservation
Jefferson City, MO

MRKED-FL 9 November 1978

MEMORANDUM FOR ED-FL FILES

SUBJECT: Blue River Channel - Habitat Evaluation

1. A habitat evaluation meeting was held in room 730, 601 E. 12th Street at the Kansas City District Office of the Corps of Engineers at 10:30 a.m., 7 August 1978, on the above subject prior to a field trip. The following people were present:

City of Kansas City, Missouri

Max Batman - (816) 274-1506

Missouri Department of Conservation

*Gary T. Christoff - (314) 751-4115

U.S. Fish & Wildlife Service

*Steven Preston - (816) 374-5951
*William Kurey - (816) 374-5951
*Ken Grannemann - (816) 374-5951

Corps of Engineers

Jack D. Nelson	- ED-HH (816) 374-3076
Robert S. Cox, Jr.	- ED-HH (816) 374-5055
Bob Ruf	- ED-BR (816) 374-2648
Dick Taylor	- ED-BR (816) 374-3672
*Van V. Shipley	- ED-BR (816) 374-5063
*Roberta Comstock	- ED-BR (816) 374-3402
*Mike McClain	- ED-FL (816) 374-3652

* Participated in field trip on 7 & 8 August 1978

2. The meeting opened with a discussion on the present and future land use in the project area. Mr. Batman stated that the area is already zoned for industry and in the next 10 to 20 years will be almost entirely developed.

3. The F&WS stated that the Habitat Evaluation Procedures (HEP) was to gain baseline data for the Blue River project area and mitigation was not the reason for HEP. A general discussion explained what a habitat evaluation is, how it is performed, and what range of results might be expected. Very briefly, a number of species are preselected, along with several

D1-00 9X

MRKED-FL 9 November 1978
SUBJECT: Blue River Channel - Habitat Evaluation

sites to be evaluated along the length of the channel project. As each site is visited, the existing vegetation, adjacent land use, general environmental condition, food sources, etc., were evaluated on a judgement basis with respect to the area's ability to support the species being considered. It was necessary to remind Mr. Preston several times that his demands for mitigation decisions were premature.

4. The species selected for study by the group are listed below:

a. Fox Squirrel
b. Raccoon
c. Cottontail Rabbit
d. Mink
e. Red-Tailed Hawk
f. Brown Thrasher
g. Wood Duck
h. White Footed Mouse
i. Grass Frog (Ranicls) - (Although most of the team members were reluctant to be specific about frogs, the most probable species in the study area is the leopard frog.)
j. Red-Headed Woodpecker

5. There were ten (10) sites selected for study ranging from just below 63rd Street to just below 23rd Street. Sites were selected to represent the following habitat types:

a. Riparian Woodlands
b. Old Fields
c. Row Crops

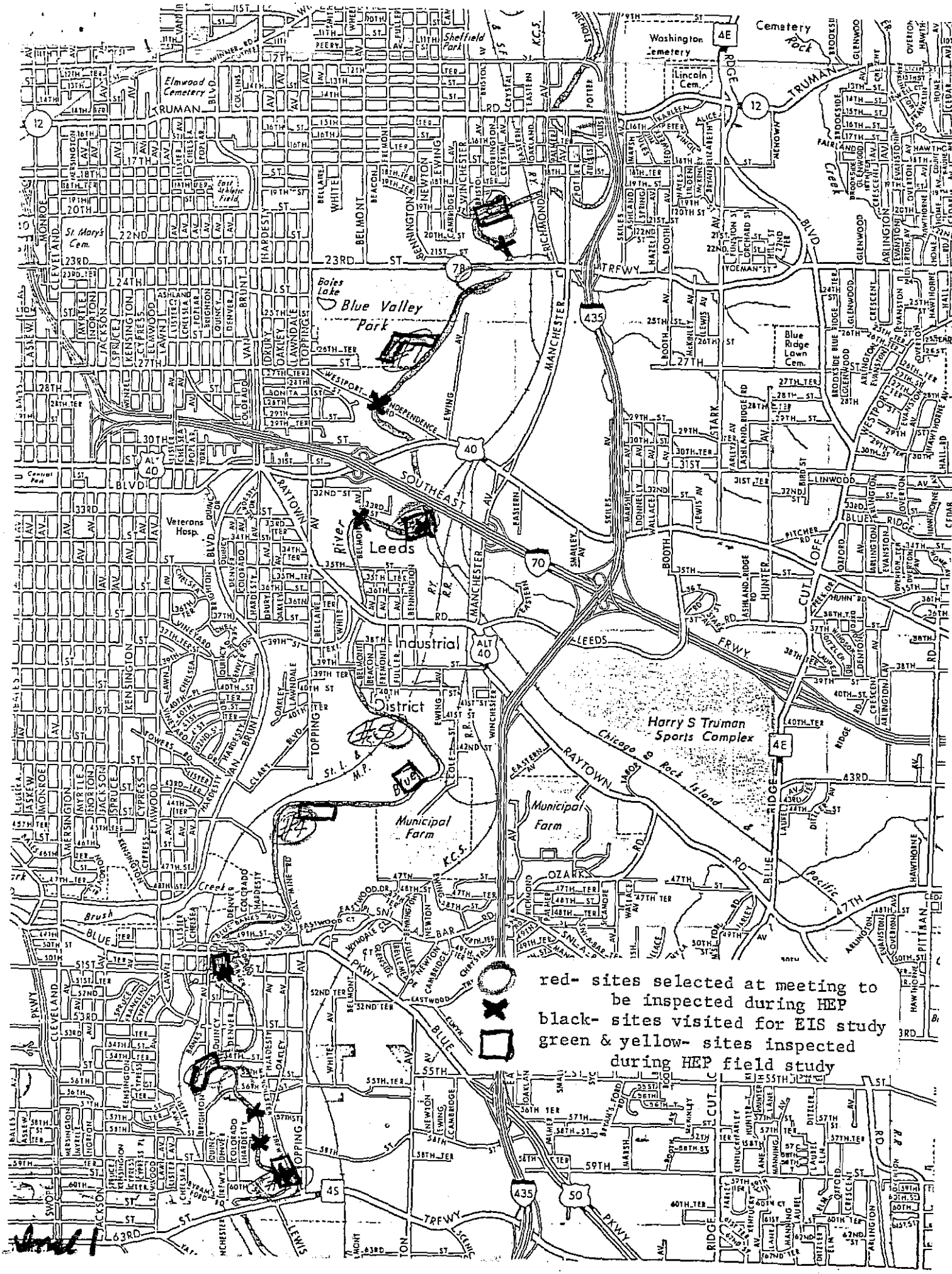
The team agreed to omit industrial and residential areas from the field evaluation. It was agreed by the three agencies represented that from the vicinity of 23rd Street on downstream (north) was essentially all heavy industry and is of zero value with respect to wildlife habitat. This is to be reflected in the final report. The sites selected and those eight (8) evaluated are shown on the inclosed map. Changes of sites in the field were made in one instance due to lack of access and in all other instances at the request of Mr. Preston.

6. All the data collected during the field trip were given to the U.S. Fish & Wildlife Service to be used in writing their report and making an evaluation and recommendations. The scores for each area and each species arrived at by the three agencies were averaged to arrive at a composite score for each site and for each species. These are to be the ones presented in the final report.

1 Incl
as

MIKE McCLAIN
Civil Engineer

CF: ED-BR


red- sites selected at meeting to be inspected during HEP
black- sites visited for EIS study
green & yellow- sites inspected during HEP field study

MRKED-BR 6 March 1980

PROPOSED MITIGATION

1) Area A = 18 acres.

2) Area B = 8 acres.

3) Area E = 12 acres.

4) Right-of-way contains 330 acres which are to be seeded as part of the contract.

5) COE has the authority to landscape the R-O-W with trees and shrubs which have a wildlife value.

6) Although fill areas J & K are to be converted to ball diamonds and for preservation of historical landmarks, some habitat will remain especially in landmark areas.

7) The city has a nature, hiking, bike trail in M.P.

Output

1), 2), & 3) Areas A - B - E = 86 units.

4) 330 Acres of R-O-W seeded has minimum value of 1 Habitat Unit/acre, therefore = 330 units.

5) Landscape plantings for wildlife have a value of at least 3 units/acre, therefore if 15 acres are planted, you have = 45 units.

6) If there are only 5 acres of fill areas J, K, L, & N left in riparian (woody vegetation), you have a production based on average habitat value of J, K, & N (or 4) of 20 units.

7) No value given for trail, but it has a man-day one.

These items totalled will provide a minimal replacement of 480 Habitat Units in an area where only 370 is needed to fully compensate.

MRKED-BR 6 March 1980

PROPOSED MITIGATION

1) Area A = 18 acres.

2) Area B = 8 acres.

Brush Cr. 3) Area E = 12 acres. 38

4) Right-of-way contains 330 acres which are to be seeded as part of the contract.

5) COE has the authority to landscape the R-O-W with trees and shrubs which have a wildlife value.

6) Although fill areas J & K are to be converted to ball diamonds and for preservation of historical landmarks, some habitat will remain especially in landmark areas.

7) The city has a nature, hiking, bike trail in M.P.

Output

1), 2), & 3) Areas A - B - E = 86 units.

4) 330 Acres of R-O-W seeded has minimum value of 1 Habitat Unit/acre, therefore = 330 units.

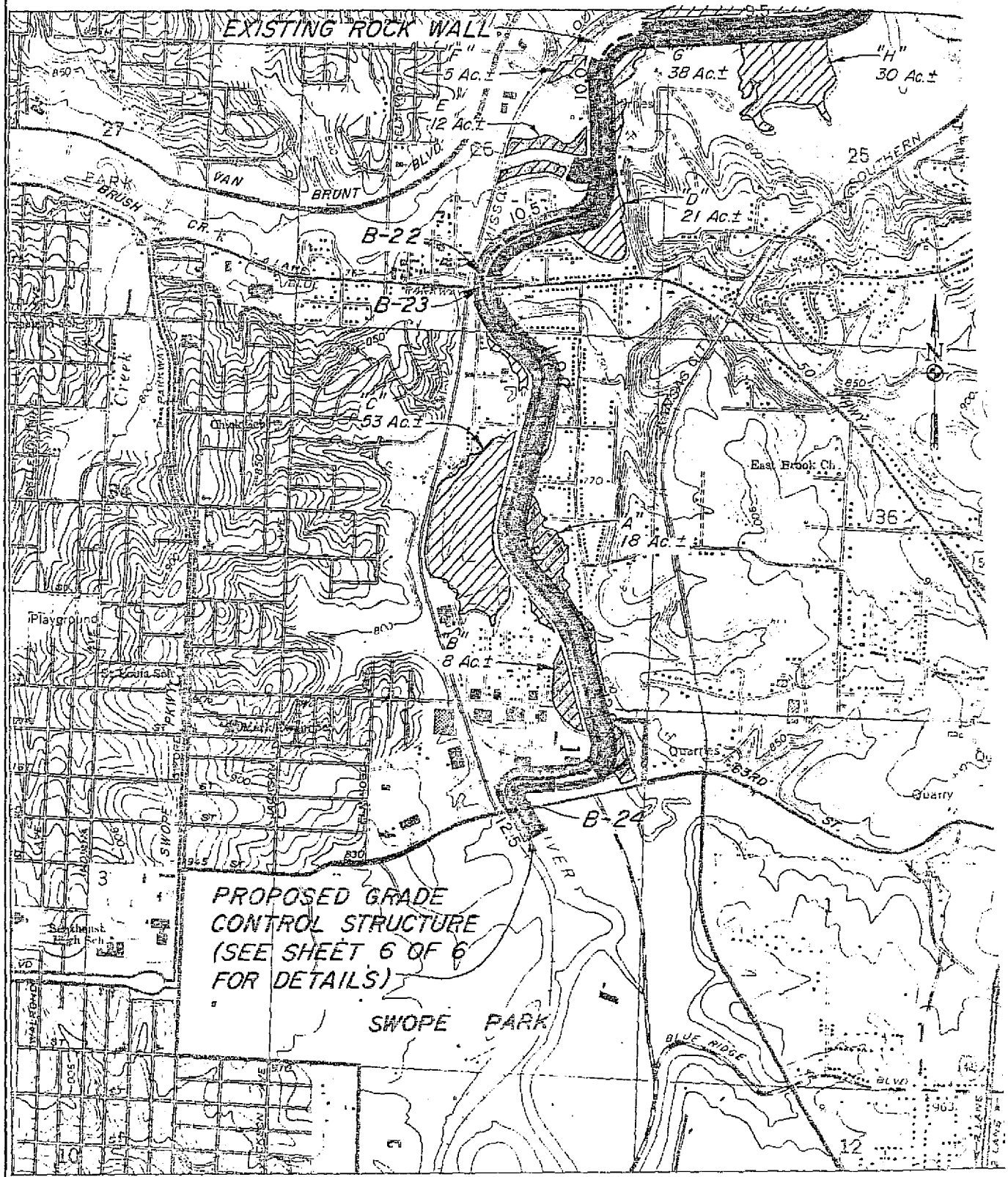
5) Landscape plantings for wildlife have a value of at least 3 units/acre, therefore if 15 acres are planted, you have = 45 units.

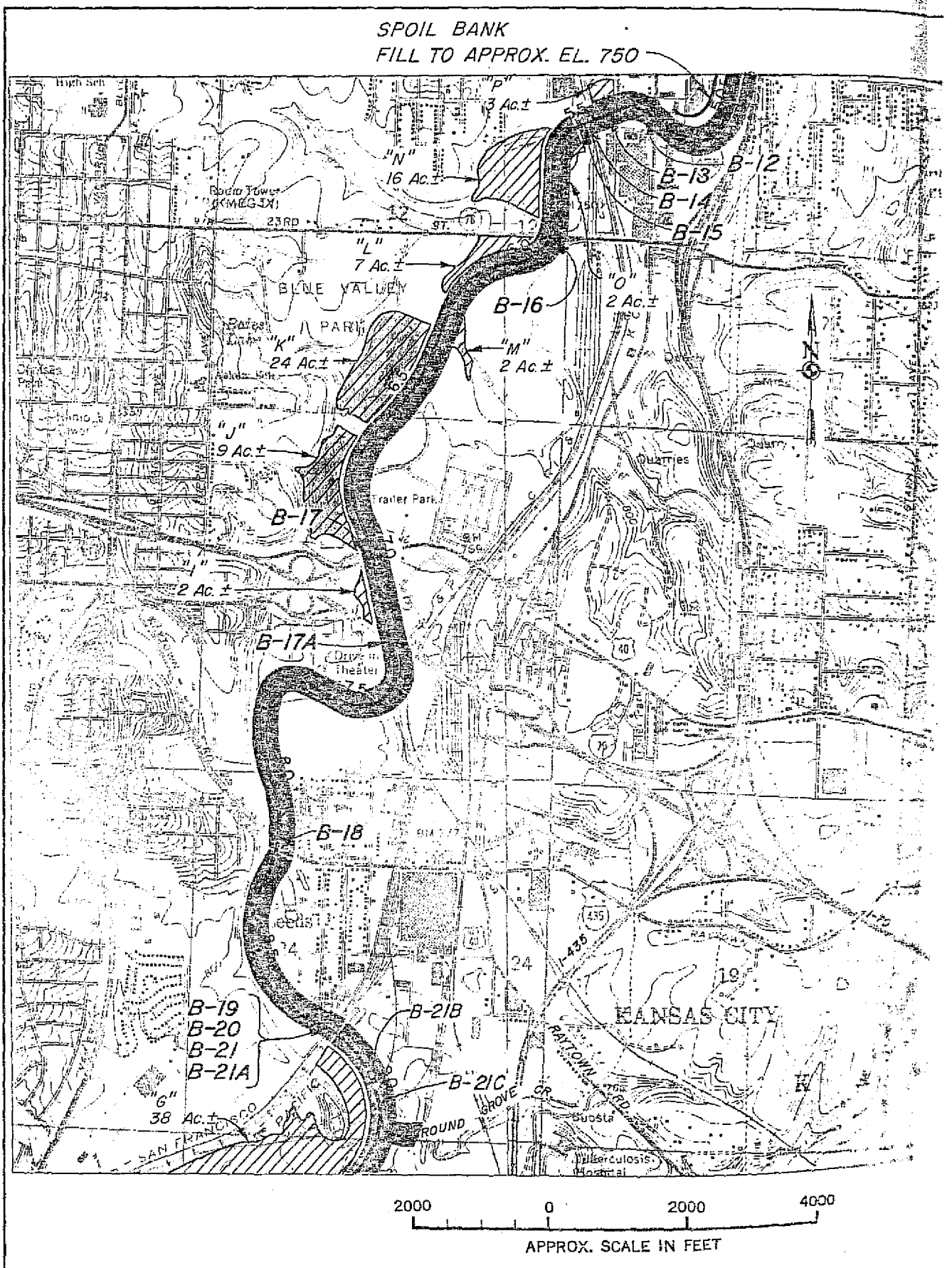
6) If there are only 5 acres of fill areas J, K, L, & N left in riparian (woody vegetation), you have a production based on average habitat value of J, K, & N (or 4) of 20 units. 9ac. 24ac. 7ac. 16 acres

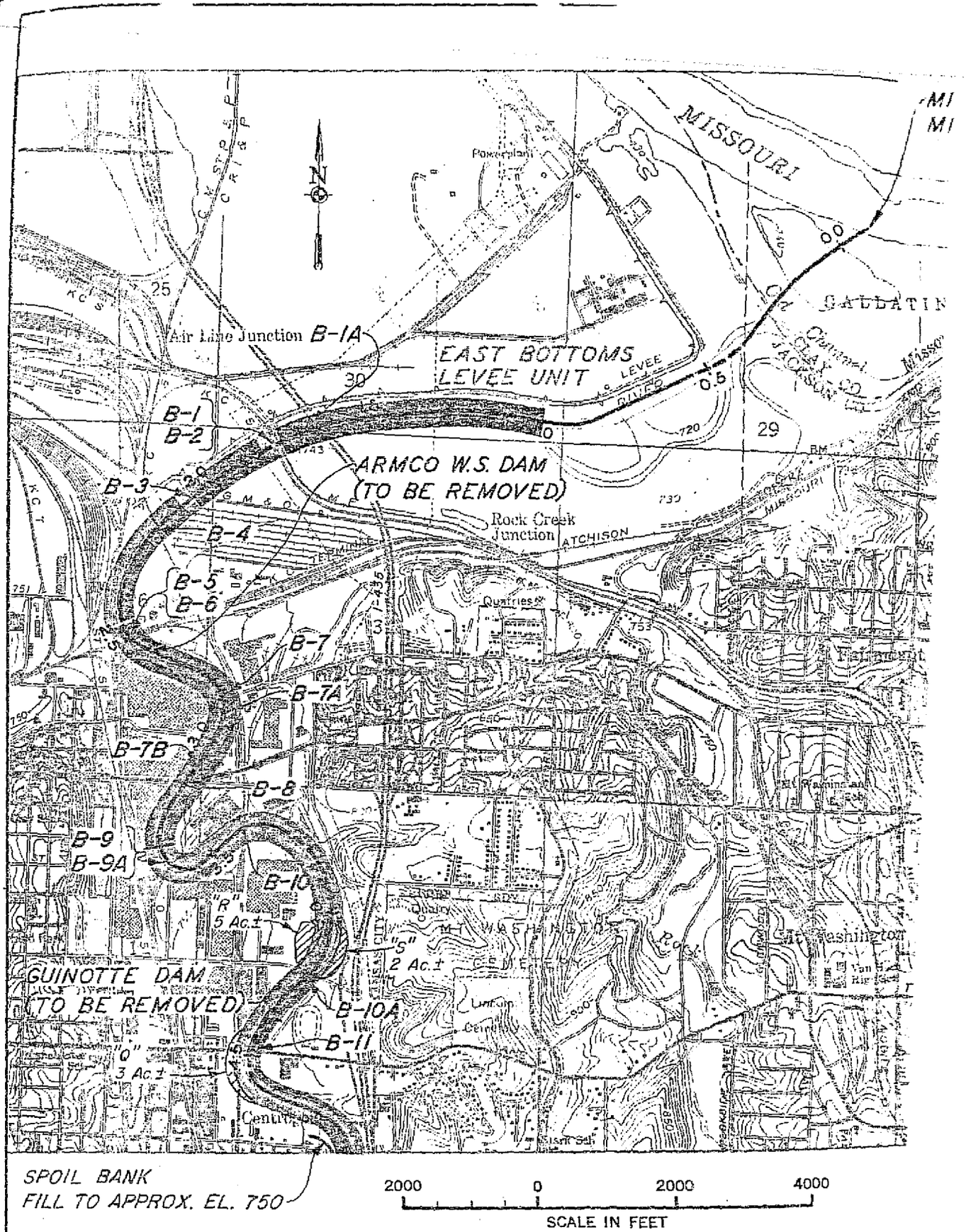
9
24
7
16
56 ac

7) No value given for trail, but it has a man-day one.

These items totalled will provide a minimal replacement of 480 Habitat Units in an area where only 370 is needed to fully compensate.


EXISTING ROCK WALL
"F" 5 Ac.±
"E" 12 Ac.±
"G" 38 Ac.±
"H" 30 Ac.±
"D" 21 Ac.±
"C" 53 Ac.±
"A" 18 Ac.±
"B" 8 Ac.±
B-22
B-23
B-24
VAN BRUNT BLVD.
BRUSH CR.
Creek
East Brook Ch.
Playground
PROPOSED GRADE CONTROL STRUCTURE (SEE SHEET 6 OF 6 FOR DETAILS)
SWOPE PARK
63RD ST.
BLUE RIDGE BLVD.
2000 0 2000 4000
SCALE IN FEET


SPOIL BANK
FILL TO APPROX. EL. 750
"P"
3 Ac.±
"N"
16 Ac.±
B-12
B-13
B-14
B-15
"L"
7 Ac.±
"O"
2 Ac.±
B-16
"M"
2 Ac.±
"K"
24 Ac.±
"J"
9 Ac.±
B-17
"I"
2 Ac.±
B-17A
B-18
B-19
B-20
B-21
B-21A
B-21B
B-21C
"G"
38 Ac.±
BLUE VALLEY
PARK
Trailer Park
Drive-In Theater
Quarries
KANSAS CITY
Tuberculosis Hospital
Radio Tower (KMBC-TV)
23RD ST
RAYTOWN RD
GROVE DR
I-435
N
2000 0 2000 4000
APPROX. SCALE IN FEET


MISSOURI
Air Line Junction
B-1A
EAST BOTTOMS
LEVEE UNIT
B-1
B-2
B-3
ARMCO W.S. DAM
(TO BE REMOVED)
B-4
Rock Creek
Junction
ATCHISON
B-5
B-6
B-7
B-7A
B-7B
B-8
B-9
B-9A
B-10
"R"
5 Ac.±
"S"
2 Ac.±
GUINOTTE DAM
(TO BE REMOVED)
B-10A
B-11
"O"
3 Ac.±
SPOIL BANK
FILL TO APPROX. EL. 750
2000
0
2000
4000
SCALE IN FEET